

REMARKS

I. STATUS OF THE APPLICATION

Claims 1 – 105 were cancelled, and claims 106 – 191 were added in the Amendment and Request for Continued Examination after Board Decision of July 25, 2006. Claim 126 is cancelled, and claims 106, 125, 134, 143, 144, 149, 160, 176 and 186 – 189 are amended in the present Amendment and Response to the Final Office Action of December 11, 2007. Therefore, claims 106 – 125, and 127 – 191, are currently pending.

In the Final Office Action of December 11, 2007 there are 4 rejections. The currently pending rejections are:

1. Claims 106 – 124 and 126 – 191 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Miller (Anesthesia, Vol. 2, pages 1323-1333, 1981) (hereinafter “Miller”) in view of Quane *et al.* (Human Molecular Genetics, Vol 3, No. 3, page 471-476, 1994) (hereinafter “Quane”) or Acta Anaesthesiologica Scandinavica (Vol 39, page 139-141, 1995) (hereinafter “Acta”) and La Du (Cellular and Molecular Neurobiology, Vol 11, No. 1, page 79-89, 1991) (hereinafter “La Du”) or Pharmacogenetics (Chapter 4, pages 309-326, IDS #201) (hereinafter “Pharmacogenetics”) and Evans *et al.* (Science, Vol 286, pages 487-491, October 1999) (hereinafter “Evans”) or Poort *et al.* (Blood, Vol 88, No 10, page 3698-3703, 1996) (hereinafter “Poort”), and further in view of Hoon *et al.* (US Pat. 6,057,105, May 2, 2000) (hereinafter “Hoon”) and Hacia (Nature Genetics Supplement, Vol. 21, pages 42-47, January, 1999) (hereinafter “Hacia”).
2. Claim 125 is rejected under 35 U.S.C. 112 first paragraph, as allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed had possession of the claimed invention.

3. Claim 125 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Miller (Anesthesia, Vol. 2, pages 1323-1333, 1981) (hereinafter “Miller”) in view of Quane *et al.* (Human Molecular Genetics, Vol 3, No. 3, page 471-476, 1994) (hereinafter “Quane”) or Acta Anaesthesiologica Scandinavica (Vol 39, page 139-141, 1995) (hereinafter “Acta”) and La Du (Cellular and Molecular Neurobiology, Vol 11, No. 1, page 79-89, 1991) (hereinafter “La Du”) or Pharmacogenetics (Chapter 4, pages 309-326, IDS #201) (hereinafter “Pharmacogenetics”) and Evans *et al.* (Science, Vol 286, pages 487-491, October 1999) (hereinafter “Evans”) or Poort *et al.* (Blood, Vol 88, No 10, page 3698-3703, 1996) (hereinafter “Poort”), and further in view of Hoon *et al.* (US Pat. 6,057,105, May 2, 2000) (hereinafter “Hoon”) and Hacia (Nature Genetics Supplement, Vol. 21, pages 42-47, January, 1999) (hereinafter “Hacia”).

4. Claims 126 and 186 are rejected under 35 U.S.C. 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

II. STATUS OF THE REJECTIONS

II.A. Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia Does Not Render the Claims Obvious

The Examiner has rejected claims 106-124 and 126 – 191 under 35 U.S.C. 103(a) as allegedly being unpatentable over Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia.

A *prima facie* case of obviousness requires the Examiner to cite to a reference which a) discloses all the elements of the claimed invention, b) suggests or motivates one of ordinary skill in the art to combine the claim elements to yield the claimed invention, and c) provides a reasonable expectation of success should the claimed combination be carried out. Failure to establish any one of these three requirements negates a finding of a *prima facie* case and, without more, entitles the Applicant to allowance of the claims in issue. (MPEP)

The Applicant submits that: a) none of the Examiner's references, alone or in combination, disclose all elements of the claimed invention; and b) the Examiner has failed to provide a suggestion or motivation to combine the elements to yield the claimed invention.

II.A.1. Missing Elements in Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia

The Applicant submits that the Examiner's combination of references fails to disclose not just one, but multiple elements of the claimed invention. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

Accordingly, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.a. The Examiner's combination of references is missing the elements of selecting a perioperative course of action based on information from a perioperative genomic profile, and performing a surgical procedure (Claim 106)

In the Final Office Action of December 11, 2007 the Examiner argues:

“With respect to the newly added method step of selection a perioperative course of action based on information from the genomic profile, this limitation was previously presented in a “for use” clause and was afforded weight. Thus re-writing the claim in a different format does not change the Examiner or the Decision on

Appeal. It would have been obvious once the genomic profile was selected, that a perioperative course of action based on the information from the profile would be followed. It is clear that Claim 86 from appeal already positively this additional method step and was affirmed by the Board.” (Final Office Action of December 11, 2007, page 11).

The Applicant respectfully disagrees. The element “selecting a perioperative course of action based on information from said genomic profile” is a method step that limits the scope of claim 106. Claim 106 is thereby limited to a process that includes selecting a perioperative course of action based on the results of the perioperative genomic profile, and is in accord with the Decision on Appeal’s holding regarding claim language providing a patentable step in a method claim (Ex parte KIRK HOGAN, page 5). The Examiner has failed to point out where in the Examiner’s cited references this element based on information from a perioperative genomic profile is to be found.

Moreover, in the Final Office Action of December 11, 2007 the Examiner has confused selecting a perioperative course of action with selecting a genomic profile (“It would have been obvious once the genomic profile was selected . . .”). Only by knowing the specific results of the perioperative genomic profile in a specific patient is it possible to select a specific perioperative course of action on the basis of the specific results. It is not possible, as the Examiner incorrectly argues, to select a perioperative course of action merely by selecting a genomic profile.

As well, the element “performing said surgical procedure wherein said perioperative course of action is used by at least one of the group consisting of an anesthesiologist, a nurse, and a surgeon” is a method step that limits the scope of claim 106. Claim 106 is thereby limited to a process that includes performing a surgical procedure based on the results of the perioperative genomic profile, and is in accord with the Decision on Appeal’s holding regarding claim language providing a patentable step in a method claim (Ex parte KIRK HOGAN, page 5). Support for this amendment may be found throughout the Specification at, for example, page 19, line 11, and page 37, lines 9 – 11. The Examiner’s cited references provide no guidance regarding which two or more nucleic acid markers in two or more genes associated with two or more conditions may

be used to carry out a surgical procedure correctly. Nor do the Examiner's cited references provide guidance to the anesthesiologist, nurse, or surgeon to balance information from the components of the perioperative genomic profile.

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 106, or of claims that are dependent thereupon. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.b. The Examiner's combination of references is missing the element of a perioperative course of action based on information from a perioperative genomic profile for a first surgical procedure (Claim 107)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 107. The element of a perioperative course of action based on information from a perioperative genomic profile for a first surgical procedure does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner's citation of the Quane reference merely suggests testing for a single disorder in a single gene after a patient has had a prior complication during a surgical procedure. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.c. The Examiner's combination of references is missing the element of a course of action based on information from a perioperative genomic profile for administration of anesthesia during a medical procedure (Claims 117, 168)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 117 and 168. The element of a course of action based on information from a perioperative genomic profile for administration of anesthesia during a medical procedure does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.d. The Examiner's combination of references is missing the element of a perioperative genomic profile comprising a presymptomatic risk (Claim 120)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 120. The element of a perioperative genomic profile comprising a presymptomatic risk does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.e. The Examiner's combination of references is missing the element of a perioperative genomic profile comprising information for differential diagnosis of co-existing diseases (Claim 121)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 121. The element of a

perioperative genomic profile comprising information for differential diagnosis of co-existing diseases does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.f. The Examiner's combination of references is missing the element of selecting a surgical procedure treatment course of action (Claim 127)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 127, or of claims that are dependent thereupon. The element of selecting a surgical procedure treatment course of action does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.g. The Examiner's combination of references is missing the element of a perioperative genomic profile consisting of alleles in genes encoding BChE, CYP2D6, MTHFR, MTR, CBS, F2, F5, RYR1, CACNA1S, and CPT2, and TNF α (Claim 134)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 134. The element of a perioperative genomic profile consisting of alleles in genes encoding BChE, CYP2D6, MTHFR, MTR, CBS, F2, F5, RYR1, CACNA1S, and CPT2, and TNF α does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The

Examiner has not indicated where this element is to be located in the Examiner's cited references. Accordingly, there is no basis in the Examiner's cited references for this set of markers. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.h. The Examiner's combination of references is missing the element of non-invasive surgery (Claims 139, 179)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 139 and 179. The element of non-invasive surgery does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.i. The Examiner's combination of references is missing the element of selection of monitoring procedures based on the results of a perioperative genomic profile (Claim 148, 175)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 148 and 175. The element of selection of monitoring procedures based on the results of a perioperative genomic profile does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.j. The Examiner's combination of references is missing the element of obtaining consent from a perioperative subject to assay a sample for genetic variations (Claim 149)

In the Final Office Action of December 11, 2007 the Examiner argues:

“With respect to Claim 149, the newly added limitations are all directed to obtaining consent, and distributing the results according to patient's preference. Miller specifically obtains consent based upon the consent form and signature on page 1325 of Miller.” (Final Office Action of December 11, 2007, page 12.)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claim 149, or of claims that are dependent thereupon. The element of obtaining consent from a perioperative subject to assay a sample for genetic variations does not appear in Miller. The Examiner has not indicated where this element is to be located in the Miller. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.k. The Examiner's combination of references is missing the element of distributing the results of a patient's perioperative genomic profile according to the patient's preference wherein the distributing is selected from the group consisting of destroying the results, saving the results for future access by the patient, saving the results for future access by a clinician, and donating the results for research (Claims 149, 189)

In the Final Office Action of December 11, 2007 the Examiner argues:

“With respect to Claim 149, the newly added limitations are all directed to obtaining consent, and distributing the results according to patient’s preference. Miller specifically obtains consent based upon the consent form and signature on page 1325 of Miller. Furthermore, the results of the analysis that the patient is receiving would be distributed to those individuals who could make an informed decision to the course of action. These individuals would be according the patience preference.” (Final Office Action of December 11, 2007, page 12.)

The Applicant respectfully disagrees. However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office’s Patent Business Goals (PBG)¹, and without waiving the right to prosecute the amended or cancelled claims (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007 claims 149 and 189 are amended herein to read:

“distributing said results of said patient’s said genomic profile according to said patient’s preference wherein said distributing is selected from the group consisting of destroying said results, saving said results for future access by said patient, saving said results for future access by said clinician, and donating said results for research;”

Support for this amendment may be found in the Specification at, for example, page 38, line 28 to page 39, line 2.

The Applicant submits that the element of “distributing said results of said patient’s said genomic profile according to said patient’s preference wherein said distributing is selected from the group consisting of destroying said results, saving said results for future access by said patient, saving said results for future access by said clinician, and donating said results for research;” does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated

¹ 65 Fed. Reg. 54603 (Sept. 8, 2000).

where in the Examiner's cited references "distributing said results of said patient's said genomic profile according to said patient's preference" is to be located. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.I. The Examiner's combination of references is missing the element of distributing the patient's sample according to the patient's preference wherein the distributing is selected from the group consisting of destroying the sample, saving the sample for future access, and donating the sample for research (Claims 149, 189)

In the Final Office Action of December 11, 2007 the Examiner argues:

"With respect to Claim 149, the newly added limitations are all directed to obtaining consent, and distributing the results according to patient's preference. Miller specifically obtains consent based upon the consent form and signature on page 1325 of Miller. Furthermore, the results of the analysis that the patient is receiving would be distributed to those individuals who could make an informed decision to the course of action. These individuals would be according the patient preference." (Final Office Action of December 11, 2007, page 12.)

The Applicant respectfully disagrees. However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office's Patent Business Goals (PBG)², and without waiving the right to prosecute the amended or cancelled claims (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007 claims 149 and 189 are amended herein to read:

"distributing said patient's said sample according to said patient's preference

² 65 Fed. Reg. 54603 (Sept. 8, 2000).

wherein said distributing is selected from the group consisting of destroying said sample, saving said sample for future access, and donating said sample for research.”

Support for this amendment may be found in the Specification at, for example, page 38, line 25 to line 28.

The Applicant submits that the element of “distributing said patient’s said sample according to said patient’s preference wherein said distributing is selected from the group consisting of destroying said sample, saving said sample for future access, and donating said sample for research.” does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where in the Examiner’s cited references “distributing said patient’s said sample according to said patient’s preference” is to be located. Thus, the Examiner’s references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.m. The Examiner’s combination of references is missing the element of a computer program comprising instructions which direct a processor to analyze results of a perioperative genomic profile (Claim 150)

The Applicant respectfully notes that the Examiner’s references both individually, and in combination, fail to teach all elements of claims 150. The element of a computer program comprising instructions which direct a processor to analyze results of a perioperative genomic profile does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner’s cited references. Thus, the Examiner’s references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.n. The Examiner's combination of references is missing the element of a computer program comprising instructions that translate results of a perioperative genomic profile into information of predictive value for a clinician (Claim 151)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 151. The element of a computer program comprising instructions that translate results of a perioperative genomic profile into information of predictive value for a clinician does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.o. The Examiner's combination of references is missing the element of a computer program comprising instructions that translate results of a perioperative genomic profile into a risk assessment of treatment options (Claim 152)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 152. The element of a computer program comprising instructions that translate results of a perioperative genomic profile into a risk assessment of treatment options does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.p. The Examiner's combination of references is missing the element of

a computer program comprising instructions that translate results of a perioperative genomic profile into recommendations for treatment options (Claim 153)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 153. The element of a computer program comprising instructions that translate results of a perioperative genomic profile into recommendations for treatment options does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.q. The Examiner's combination of references is missing the element of a computer program comprising instructions that generate a report of a perioperative genomic profile for display to a clinician (Claim 154)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 154. The element of a computer program comprising instructions that generate a report of a perioperative genomic profile for display to a clinician does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.r. The Examiner's combination of references is missing the element of a computer program comprising instructions that generate a printed report of a perioperative genomic profile (Claim 155)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 155. The element of a computer program comprising instructions that generate a printed report of a perioperative genomic profile does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.s. The Examiner's combination of references is missing the element of a computer program comprising instructions that generate a report of a perioperative genomic profile on a computer monitor (Claim 156)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 156. The element of a computer program comprising instructions that generate a report of a perioperative genomic profile on a computer monitor does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.t. The Examiner's combination of references is missing the element of a computer program comprising instructions that receive, process and transmit results of a perioperative genomic profile to and from a patient, clinical laboratory and medical personnel (Claim 157)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 157. The element of a computer program comprising instructions that receive, process and transmit results of a perioperative genomic profile to and from a patient, clinical laboratory and medical personnel does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.u. The Examiner's combination of references is missing the element of a computer program comprising instructions that transmit results of a perioperative genomic profile using an electronic communication system (Claim 158)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 158. The element of a computer program comprising instructions that transmit results of a perioperative genomic profile using an electronic communication system does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.v. The Examiner's combination of references is missing the element of a computer program comprising instructions that transmit results of a perioperative genomic profile using an electronic communication system to a distant computer system for processing (Claim 159)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 159. The element of a computer program comprising instructions that transmit results of a perioperative genomic profile using an electronic communication system to a distant computer system for processing does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.w. The Examiner's combination of references is missing the element of a computer program comprising instructions wherein the instructions comprise information to optimize perioperative care that, based on at least the presence of variant alleles of two or more genes associated with two or more conditions selected from the group consisting of *BChE*, *CYP2D6*, *F5*, *F2*, *CACNAIS*, *MTHFR*, *MTR*, *MTRR*, *CBS*, and *TNF α* , directs a clinician to a specific perioperative clinical pathway for a patient (Claim 160)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 160. The element of a computer program comprising instructions wherein the instructions comprise information to optimize perioperative care that, based on at least the presence of variant alleles of two or more genes associated with two or more conditions selected from the group consisting of *BChE*, *CYP2D6*, *F5*, *F2*, *CACNAIS*, *MTHFR*, *MTR*, *MTRR*, *CBS*, and *TNF α* , directs a clinician to a specific perioperative clinical pathway for a patient does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.x. The Examiner's combination of references is missing the element of a perioperative treatment course of action comprising pre-operative phenotypic tests and consultations (Claim 176)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 176. The element of a perioperative treatment course of action comprising pre-operative phenotypic tests and consultations does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.y. The Examiner's combination of references is missing the element of an assay comprising structure-specific cleavage of oligonucleotide probes (Claim 185)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 185. The element of an assay comprising structure-specific cleavage of oligonucleotide probes does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.z. The Examiner's combination of references is missing the element of providing a kit comprising a computer program on a computer readable medium comprising instructions which direct a processor to analyze data derived from use of reagents configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, the subject being a patient scheduled for a surgical procedure that has not yet completed the surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE*, *CYP2D6*, *F5*, *F2*, *CACNAIS*, *MTHFR*, *MTR*, *MTRR*, *CBS*, and *TNF α* so as to generate a genomic profile for use in selecting a perioperative course of action for the subject (Claim 186)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 186. The element of providing a kit comprising a computer program on a computer readable medium comprising instructions which direct a processor to analyze data derived from use of reagents configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, the subject being a patient scheduled for a surgical procedure that has not yet completed the surgical procedure, are sufficient to detect the presence or absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE*, *CYP2D6*, *F5*, *F2*, *CACNAIS*, *MTHFR*, *MTR*, *MTRR*, *CBS*, and *TNF α* so as to generate a genomic profile for use in selecting a perioperative course of action for the subject does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.aa. The Examiner's combination of references is missing the element of generating a perioperative genomic profile with the kit of Claim 186 (Claim 186)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 186. The element of generating a perioperative genomic profile with the kit of Claim 186 does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.bb. The Examiner's combination of references is missing the element of encrypting the results of a perioperative genomic profile with privacy security protocols (Claim 187)

In the Final Office Action of December 11, 2007 the Examiner argues:

"With respect to Claim 187-188, Hacia teaches mutations are detected by a minisequencing assay using an algorithm. The data obtained is placed in a computer which is encrypted, but is accessible to readers, i.e. decoded." (Final Office Action of December 11, 2007, page 12.)

The Applicant respectfully disagrees. However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office's Patent Business Goals (PBG)³, and without waiving the right to prosecute the amended or cancelled claims (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007 claim 187 is amended herein to read:

³ 65 Fed. Reg. 54603 (Sept. 8, 2000).

“The method of Claim 149, further comprising the step of encrypting said results of said genomic profile with privacy security protocols.”

Support for this amendment may be found in the Specification at, for example, page 38, lines 18 – 21.

The Applicant submits that the element of “encrypting said results of said genomic profile with privacy security protocols.” does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. Thus, the Examiner’s references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.cc. The Examiner’s combination of references is missing the element of decoding the results of a perioperative genomic profile with privacy security protocols (Claim 187)

In the Final Office Action of December 11, 2007 the Examiner argues:

“With respect to Claim 187-188, Hacia teaches mutations are detected by a minisequencing assay using an algorithm. The data obtained is placed in a computer which is encrypted, but is accessible to readers, i.e. decoded.” (Final Office Action of December 11, 2007, page 12.)

The Applicant respectfully disagrees. However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office’s Patent Business Goals (PBG)⁴, and without waiving the right to prosecute the amended or cancelled claims (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007 claim 187 is amended herein to read:

⁴ 65 Fed. Reg. 54603 (Sept. 8, 2000).

“The method of Claim 149, further comprising the step of decoding said results of said genomic profile with privacy security protocols.”

Support for this amendment may be found in the Specification at, for example, page 38, lines 18 – 21.

The Applicant submits that the element of “decoding said results of said genomic profile with privacy security protocols.” does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. Thus, the Examiner’s references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.dd. The Examiner’s combination of references is missing the element of selecting perioperative genomic profile markers by the criteria of analytical validity, clinical validity and clinical utility (Claim 189)

The Applicant respectfully notes that the Examiner’s references both individually, and in combination, fail to teach all elements of claims 189, and claims that are dependent thereupon. The element of selecting perioperative genomic profile markers by the criteria of analytical validity, clinical validity and clinical utility does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner’s cited references. Thus, the Examiner’s references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.1.ee. The Examiner’s combination of references is missing the element of

an integrated electronic system for organization of marker selection, subjecting a sample to an assay, and distributing the results of a patient's perioperative genomic profile (Claim 190)

The Applicant respectfully notes that the Examiner's references both individually, and in combination, fail to teach all elements of claims 190. The element of an integrated electronic system for organization of marker selection, subjecting a sample to an assay, and distributing the results of a patient's perioperative genomic profile does not appear in Miller, Quane, Acta, La Du, Pharmacogenetics, Evans, Poort, Hoon or Hacia. The Examiner has not indicated where this element is to be located in the Examiner's cited references. Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.A.2. The Examiner Provides no Motivation to Combine Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia

In the Final Office Action of December 11, 2006 the Examiner argues:

"The ordinary artisan would have been motivated to have screened individuals within two days prior to surgery to determine the genetic composition of the individuals to provide individual diagnosis. Thus, the ordinary artisan would have been motivated to test patients within two days prior to surgery for mutations within any of the known mutations which are associated with known conditions for the expected benefit of determining whether the patient possessed any mutations which were linked to the known conditions such that the clinician may avoid any adverse reactions to the surgical procedure. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have modified the vast number of teachings, as exemplified by the

extremely voluminous Information Disclosure Statement filed, to screen individuals prior to surgery for several genetic markers which are indicative of any number of conditions which are caused by anesthesia or are a result of anesthesia.” (Final Office Action of December 11, 2006, page 9.)

The Applicant submits that the Examiner correctly identifies one of ordinary skill in the art as a clinician. Moreover, the Examiner expressly recognizes an anesthesiologist as one of ordinary skill in the art:

“Combining more than one screening method to determine the genomic profile of a patient would have provided the anesthesiologist with a more complete picture or the patients genetic make-up.” (Final Office Action of December 11, 2006, page 10.)

However, the Applicant submits that the Examiner’s speculations and conclusory statements regarding the motivation of an ordinary artisan to combine the claim elements to yield the claimed invention are in error. The Examiner has failed to indicate where in the references cited, or elsewhere, there is such a suggestion of desirability to combine. The Examiner must provide a basis for combining alleged art references and their elements. Indeed, the requirement that the Examiner make a showing of a suggestion, teaching or motivation to combine the prior art references is "an essential evidentiary component of an obviousness holding."⁵ The Applicant asks the Examiner to take note of the recent Supreme Court opinion which says that a specific showing by the Examiner is required:

“Often, it will be necessary ... to look to interrelated teachings of multiple patents ... in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. See, *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]jections on obviousness grounds cannot be sustained by

⁵ *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998).

mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).⁶

The Applicant submits herewith the Declaration of Dr. Douglas Baird Coursin. In his Declaration, Dr. Coursin explains that there was no suggestion or teaching in the prior art for the periperative genomic profiles of the presently claimed invention. Dr. Coursin further explains the long felt and unmet need for this solution to the problem of inborn predispositions to complications during anesthesia and surgery, and the unexpected success of the technology.

The Examiner's cited references, the Examiners reference to the “the vast number of teachings, as exemplified by the extremely voluminous Information Disclosure Statement filed”, and the Examiner's recognition of the desire to save lives, stand in stark contrast to the absence of anyone having come up with the invention prior to the filing of the present application. Applicant notes that most of the references predate the filing of the application by many years. In view of all of this knowledge in the art, no one had come up with the invention. The Examiner has not found a single anticipatory reference. Why is this?

Dr. Coursin's declaration provides an explanation. Dr. Coursin is one of the leading anesthesiologists in the country, and has been for many years. Dr. Coursin explains that skilled artisans, such as anesthesiologists, have as a primary mission to solve the problem solved by the present invention. Yet even with this long-felt need and years of searching by innumerable practitioners, no one solved this long-felt need using the approach of the present invention. Dr. Coursin explains that he, himself, has since used embodiments of the invention and achieved excellent, and unexpected, results.

In a situation like the present one, there may be no better evidence of non-obviousness than the failure of an entire field to solve their primary problem, even with a wealth of information and technology known in the literature. The field failed to realize the solution because the solution was not obvious to these skilled artisans. These skilled

⁶ *KSR v. Teleflex*, Slip Op No. 04-1350 (April 30, 2007).

artisans would not, and did not, see the combination the Examiner proposes they should have seen.

The United States Patent and Trademark Office's rejection is based on hindsight knowledge of the invention wherein the Examiner has assumed what skilled artisans *should have* thought of the invention in view of numerous disparate pieces of prior art. In making the rejection, the Examiner, who is not one of skill in the art and who is in possession of hindsight knowledge of the invention, has *seen* an invention that the entire world of skilled artisans, focused for many years on the exact problem solved by the invention, had failed to see. Artisans, of ordinary and extraordinary skill in the field, who have devoted their careers to solving this problem, never put together the Examiner's combination of references, and never solved the problem. The only logical explanation is that the invention is non-obvious.

Notably missing from the Examiner's rejection is placement in the hands and minds of skilled artisans of: 1) the prior art of record (is this the type of work one skilled in the art would have reviewed in assessing the problem?); and 2) the mental and experimental process for modifying the art to arrive at the invention (even if they would have reviewed the cited art, would they have put the pieces together and modified the pieces appropriately?). At no point does the Examiner provide evidence of the handling of the references in the hands and minds of the appropriate skilled artisan. Regardless, even if the Examiner had done this, the evidence of long-felt but unresolved need demonstrates that skilled artisan did not, and would not, arrive at the invention. If it were obvious, they would have done it years before the filing of the present application. Likewise, if it were obvious, Dr. Coursin and others who later employed the invention would not be surprised by the success of the invention at solving the problem.

Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims. In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.B. Claim 125 is not New Matter

In the Final Office Action of December 11, 2007 the Examiner argues:

“Claim 125 is rejected under 35 U.S.C. 112 first paragraph, as containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed had possession of the claimed invention.” (Final Office Action of December 11, 2007, page 12).

And:

“It is noted that the CIP application has added two TNF genes, but this parent application does not refer to TNFalpha or TNFbeta. The description does not support TNFalpha and TNFbeta. The concept of markers within “TNFalpha and TNFbeta” does not appear to be part of the originally filed invention. Therefore, “TNFalpha and TNFbeta” constitutes new matter.” (Final Office Action of December 11, 2007, pages 12 – 13).

The Applicant respectfully disagrees. Ample and explicit support for TNF alpha may be found in the Specification at, for example, page 2, lines 26 – 28, page 25, line 33, and page 29, lines 9 – 15.

However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office’s Patent Business Goals (PBG)⁷, and without waiving the right to prosecute the amended or cancelled claims (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007, claims 125, 160 and 186 are amended herein to read:

“said genomic profile consists of alleles in genes encoding BChE, CYP2D6, MTHFR, MTR, CBS, F2, F5, RYR1, CACNA1S, and CPT2, and TNF α ”

As well, claims 160 and 186 are amended herein to read:

⁷ 65 Fed. Reg. 54603 (Sept. 8, 2000).

“the group consisting of *BChE*, *CYP2D6*, *F5*, *F2*, *CACNAIS*, *MTHFR*, *MTR*, *MTRR*, *CBS*, and *TNF α* ”

In view of the above, the Applicant requests that this rejection be withdrawn.

II.C. Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia Does Not Render the Claim 125 Obvious

The Examiner has rejected claim 125 under 35 U.S.C. 103(a) as allegedly being unpatentable over Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia.

A *prima facie* case of obviousness requires the Examiner to cite to a reference which a) discloses all the elements of the claimed invention, b) suggests or motivates one of ordinary skill in the art to combine the claim elements to yield the claimed invention, and c) provides a reasonable expectation of success should the claimed combination be carried out. Failure to establish any one of these three requirements negates a finding of a *prima facie* case and, without more, entitles the Applicant to allowance of the claims in issue. (MPEP)

The Applicant submits that: a) none of the Examiner’s references, alone or in combination, disclose all elements of the claimed invention; and b) the Examiner has failed to provide a suggestion or motivation to combine the elements to yield the claimed invention.

II.C.1. Missing Elements in Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia

In the Final Office Action of December 11, 2007 the Examiner concedes:

“Miller, Quane, AAS, La Du, Pharmacogenetics Poort, Hoon and Hacia do not specifically teach profiling for each of BchE, CYP2D6, MTHFR, MTR, CBS, F2, F5, RYR1, CACNA1S, CPT2, TNFA and TNF. The instant specification teaches markers in each of these genes which are associated with various operative related disorders. The specification clearly illustrates genes and mutations which are associated with the particular mutations. . . . Therefore, it would have been obvious in view of the teachings of Miller, Quane, AAS, La Du, Pharmacogenetics,. Poort, Hoon and Hacia to include any number of genes on the array of Hacia for the high throughput analysis of operative conditions.” (Final Office Action of December 11, 2007, page 13.)

Hence, the Examiner acknowledges that the Examiner’s cited references are missing elements of the claimed invention, but then three sentences later the Examiner finds the missing elements in the same references.

In this argument the Examiner makes a number of errors. First, it is unclear what the Examiner means by “The specification clearly illustrates genes and mutations which are associated with the particular mutations.” Second, the only source cited by the Examiner providing the missing elements is the Specification of the present application. Third, claim 125 is not directed to “any number of genes” as mischaracterized by the Examiner. Claim 125 is directed to a genomic profile that “consists of alleles in genes encoding BChE, CYP2D6, MTHFR, MTR, CBS, F2, F5, RYR1, CACNA1S, and CPT2, and TNF α ”. The Examiner’s combination of references lacks this element. The Examiner’s combination of references lacks any guidance for arriving at this element. Thus, the Examiner’s references fail to establish *prima facie* obviousness of the claims.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.C.2. The Examiner Provides no Motivation to Combine Miller in view of Quane or Acta and La Du or Pharmacogenetics and Evans or Poort, and further in view of Hoon and Hacia.

In the Final Office Action of December 11, 2006 the Examiner argues:

“The ordinary artisan would have been motivated to have screened individuals within two days prior to surgery to determine the genetic composition of the individuals to provide individual diagnosis. Thus, the ordinary artisan would have been motivated to test patients within two days prior to surgery for mutations within any of the known mutations which are associated with known conditions for the expected benefit of determining whether the patient possessed any mutations which were linked to the known conditions such that the clinician may avoid any adverse reactions to the surgical procedure. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified the vast number of teachings, as exemplified by the extremely voluminous Information Disclosure Statement filed, to screen individuals prior to surgery for several genetic markers which are indicative of any number of conditions which are caused by anesthesia or are a result of anesthesia.” (Final Office Action of December 11, 2006, page 9.)

The Applicant submits that the Examiner correctly identifies one of ordinary skill in the art as a clinician. Moreover, the Examiner expressly recognizes an anesthesiologist as one of ordinary skill in the art:

“Combining more than one screening method to determine the genomic profile of a patient would have provided the anesthesiologist with a more complete picture or the patients genetic make-up.” (Final Office Action of December 11, 2006, page 10.)

However, the Applicant submits that the Examiner’s speculations and conclusory statements regarding the motivation of an ordinary artisan to combine the claim elements to yield the claimed invention are in error. The Examiner has failed to indicate where in the references cited there is such a suggestion of desirability to combine. The Examiner must provide a basis for combining art prior to considering the combination. Indeed, the

requirement that the Examiner make a showing of a suggestion, teaching or motivation to combine the prior art references is "an essential evidentiary component of an obviousness holding."⁸ The Applicant asks the Examiner to take note of the recent Supreme Court opinion which says that a specific showing by the Examiner is required:

"Often, it will be necessary ... to look to interrelated teachings of multiple patents ... in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. See, *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").⁹

The Applicant submits herewith the Declaration of Dr. Douglas Baird Coursin. In his Declaration, Dr. Coursin notes that there was no suggestion or teaching in the prior art for the periporative genomic profiles of the presently claimed invention. Dr. Coursin further notes the long felt and unmet need for this solution to the problem of inborn predispositions to complications during anesthesia and surgery, and the unexpected success of the technology.

Thus, the Examiner's references fail to establish *prima facie* obviousness of the claims. In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.D. Rejections of Claims 126 and 186 under 35 U.S.C. §112

In the Final Office Action of December 11, 2206 the Examiner argues:

⁸ *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998).

⁹ *KSR v. Teleflex*, Slip Op No. 04-1350 (April 30, 2007).

“Claims 126 and 186 are rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.” (Final Office Action of December 11, 2007, page 14.)

II.D.1. Rejections of Claim 126 under 35 U.S.C. §112

In the Final Office Action of December 11, 2006 the Examiner argues:

“A) Claim 26 is directed to a method further comprising using the profile for selection of conditions which appear to be already present in step (c) of the newly added claim.” (Final Office Action of December 11, 2007, page 14.)

The Applicant assumes that the Examiner has made an error, and instead intended to refer to claim 126. Moreover, the Applicant assumes that the claim referred to by the Examiner as “the newly added claim” is in fact claim 106.

Assuming that this interpretation of the Examiner’s rejection is correct, the Applicant respectfully disagrees. However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office’s Patent Business Goals (PBG)¹⁰, and without waiving the right to prosecute the amended or cancelled claims (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007, claim 126 is cancelled thereby rendering the Examiner’s rejection moot.

As well, claim 106 is amended herein to read:

“d) performing said surgical procedure wherein said perioperative course of action is used by at least one of the group consisting of an anesthesiologist, a nurse, and a surgeon.”

¹⁰ 65 Fed. Reg. 54603 (Sept. 8, 2000).

The Applicant submits that the amendment to claim 106 adds no new matter. Support for the amendment may be found in the Specification at, for example, page 19, line 11, and page 37, lines 9 – 11.

The cancellation and amendment of claims presented herein are made without acquiescing to the Examiner's arguments or rejections. In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

II.D.2. Rejections of Claim 186 under 35 U.S.C. §112

In the Final Office Action of December 11, 2006 the Examiner argues:

“B) Claim 186 is indefinite because the method relies on a kit. It is unclear how the assay comprises a kit. It is unclear whether the assay comprises using a kit or whether the assay is intended to be limited to a kit. Clarification is required.”

(Final Office Action of December 11, 2006, page 14.)

The Applicant respectfully disagrees. However, in order to expedite the patent application process in a manner consistent with the U.S. Patent and Trademark Office's Patent Business Goals (PBG)¹¹, and without waiving the right to prosecute the amended claim (or similar claims) in the future, in the present Amendment and Response to Final Office Action of December 11, 2007, claim 186 is amended herein to read:

“186. The method of Claim 149, wherein said subjecting said DNA to an assay further comprises:

- i. providing a kit for generating a perioperative genomic profile for a subject, comprising:
 - a) reagents configured such that when exposed to a sample containing target nucleic acid from a perioperative subject, said subject being a patient scheduled for a surgical procedure that has not yet completed said surgical procedure, are sufficient to detect the presence or

¹¹ 65 Fed. Reg. 54603 (Sept. 8, 2000).

absence of variant alleles in two or more genes associated with two or more conditions selected from the group consisting of *BChE*, *CYP2D6*, *F5*, *F2*, *CACNAIS*, *MTHFR*, *MTR*, *MTRR*, *CBS*, and *TNF α* ~~and *TNF β*~~ so as to generate a genomic profile for use in selecting a perioperative course of action for said subject; and

- b) a computer program on a computer readable medium comprising instructions which direct a processor to analyze data derived from use of said reagents; and
- ii. generating said genomic profile with said kit.”

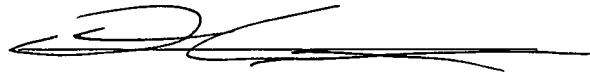
The Applicant submits that the amendment to claim 186 adds no new matter.

In view of the above, the Applicant respectfully requests that this rejection be withdrawn.

CONCLUSION

The Applicant believes that the pending claims should be passed into allowance. Should the Examiner believe that a telephone interview would aid in the prosecution of this application Applicant encourages the Examiner to call the undersigned collect at (608) 218-6900.

Dated: 5/11/07



David A. Casimir
Registration No. 42,395

MEDLEN & CARROLL, LLP
101 Howard Street, Suite 350
San Francisco, California 94105
(608) 218-6900